$724 per child. Yearly costs borne by the family totaled $20.5 billion. Specifically, annual out-of-pocket costs were $5.5 billion, with 31% stemming from the cost of special foods, and annual opportunity costs totaled $14.2 billion, relating to a caregiver needing to leave or change jobs. Caregivers were willing to pay $20.8 billion annually for a theoretical effective food allergy treatment (95% confidence interval: 15.7–25.7).

CONCLUSIONS. Childhood food allergy in the United States incurs significant direct medical costs to the US health care system and even larger costs to families with a food-allergic child. Caregivers’ willingness to pay for a theoretical effective food allergy treatment was similar to the total costs currently borne by families associated with out-of-pocket expenses, lost labor productivity, and lost opportunity in 1 year.

REVIEWER COMMENTS. As the authors indicate, this is the first study to comprehensively quantify the economic impact of childhood food allergy in the United States. Of an estimated $25 billion annual cost incurred, the most costly category was opportunity costs ($14 billion), defined as caregiver job change, restriction, or loss, which was a subjective measure based on self-report. Moreover, approximately one-quarter of the cohort surveyed was recruited from a food allergy support and advocacy organization, which may attract members who perceive food allergy as having a more significant impact on their quality of life. Nonetheless, the study highlights the considerable financial impact borne by families of children having food allergy.


Jennifer S. Kim, MD
Chicago, IL

The Natural History and Clinical Predictors of Egg Allergy in the First 2 Years of Life: A Prospective, Population-Based Cohort Study

PURPOSE OF THE STUDY. The goal of this study was to gauge the natural history of egg allergy in a population-based cohort and to identify factors predicting persistence.

STUDY POPULATION. Children (n = 264) determined to be allergic to raw eggs (according to results of skin testing and oral food challenge) were recruited during February 2010 to August 2011 from the HealthNuts study, a prospective, population-based cohort of food-allergic children recruited at age 12 months (N = 5267) during immunization sessions in Melbourne, Australia.

METHODS. Egg-allergic infants were offered a baked egg oral food challenge to phenotype them as baked egg tolerant and baked egg allergic. At age 2 years, all infants were invited for repeat oral food challenge to raw egg, skin prick testing (SPT), and egg-specific IgE testing. A survey was administered (by telephone or in the clinic) at ages 1 and 2 years to determine the frequency of baked egg ingestion.

RESULTS. A total of 140 of 264 infants participated in the follow-up at age 2 years. Egg allergy resolved in 47% (95% confidence interval: 37–56) by age 2 years. Of those patients who were baked egg tolerant at 1 year of age, 56% experienced resolution of their egg allergy compared with only 13% with baked egg allergy (P = .02). Those infants classified as baked egg tolerant who had frequent consumption (≥5 times/month) of baked products were more likely to resolve their egg allergy compared with those with infrequent (0–4 times/month) consumption (adjusted odds ratio: 3.52 [95% confidence interval: 1.38–8.98]; P = .009). After adjusting for confounders, SPT of ≥4 mm and egg-specific IgE ≥1.7 kU/L were the only 2 measures (P = .003) predictive of egg allergy persistence.

CONCLUSIONS. In this community-based population cohort, nearly one-half of all challenge-confirmed egg-allergic infants were egg tolerant at 2 years of age; however, the percentage of resolution was significantly increased for those with the baked egg–tolerant phenotype at age 1 year and for those with frequent consumption of baked egg products. Although the baked egg–tolerant phenotype is predictive of egg allergy resolution, SPT and egg-specific IgE aided in predicting persistence of egg allergy.

REVIEWER COMMENTS. This study is the first of its kind to evaluate the natural history of egg allergy in infants at the community level. Previous studies have evaluated egg-allergic children from subspecialty cohorts in which severe allergic disease is more highly represented, possibly leading to a higher average age at which tolerance to egg develops. This study highlights the importance of a detailed dietary history during initial egg allergy assessment as continued dietary ingestion of baked egg for those who tolerate it without allergic symptoms predicts possible earlier resolution. The differences observed in raw egg tolerance development between the baked egg–allergic and baked egg–tolerant phenotypes also have important implications for future studies in egg oral immunotherapy.

URL: www.pediatrics.org/cgi/doi/10.1542/peds.2014–1817EE

Amika Sood, MD
Stacie M. Jones, MD
Little Rock, AR

Baseline Specific IgE levels Are Useful to Predict Safety of Oral Immunotherapy in Egg-Allergic Children

PURPOSE OF THE STUDY. The goal of this study was to evaluate the safety of egg oral immunotherapy (OIT) and to predict
The Natural History and Clinical Predictors of Egg Allergy in the First 2 Years of Life: A Prospective, Population-Based Cohort Study
Amika Sood and Stacie M. Jones
*Pediatrics* 2014;134;S150
DOI: 10.1542/peds.2014-1817EE

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Amika Sood and Stacie M. Jones

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DOI: 10.1542/peds.2014-1817EE

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